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ABSTRACT

This paper explores the use of data for evidence in the task of building dialogue in an action research project developed for student teachers in the University of Wisconsin "Action Research on Action Research" project. Three particular uses are found. First, data in the form of information is gathered on a topic under discussion or investigation, namely, the Action Research Project. Each student as well as the supervisor has data on her/his own focus which can be shared with the group. Dealing with this data becomes the focus of a second phase of data gathering: data about how the group processes are working in meeting goals, whether jointly set as co-researchers or in relation to individually specific situations. Finally, there is the data about what is being learned about action research, which is the focus of the supervisors in their joint project. The point of collecting the data is to further the communicative action of members of the group and to promote greater articulation and understanding of the specific interests and tasks of student teaching. Brief case histories of students, focusing on classroom management and discipline as their projects, are used to demonstrate how the discussion of data assisted group members to build and articulate their own theories. (JD)

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REFLECTION IN STUDENT TEACHING: THE PLACE OF DATA IN ACTION RESEARCH

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This paper had its beginnings in two continents; its topic provided the focus for a meeting between two people with very different and biographies and experiences of action research. Starting from a common interest in action research, we have been able to cross some cultural barriers and connect our political, academic and personal lives, individually and jointly. The paper is a testament to continuing conversations, and shared projects, although it re-presents only a small part of our work on action research with our student teachers and the 'action research-on-action research' project at the University of Wisconsin-Madison.

We start with the personal because action research is a highly personal as well as political activity. It is not merely a technique, an instrument or method for educational research. Rather, we see it as a profound challenge to many of the assumptions and practices of social research and educational research in particular. Our version of action research in education -- and there are many versions circulating[1] -- is particularly concerned with exploring reflexively how research can contribute to the empowerment of teachers and thereby alter what occurs in schools. Because of this, we see ourselves contributing to the tradition of recent critical curriculum and feminist efforts "to create empowering and self-reflexive research designs" (Lather, 1987:3) and share Lather's assumption that "an emancipatory social science must be premised upon the development of research approaches which both empower the researched and contribute to the generation of change enhancing social theory" (Lather,1987:4).

Our work as supervisors of student teachers in the Elementary Education program at the UW-Madison has provided the opportunity for us to undertake action research ourselves and to ask our students to do it as a university project requirement, forming part of their final placement in schools for student teaching field experience[2]. We undertake our own action research project alongside theirs, so that the two kinds of project can work together in dialogue about action research and student teaching. In this paper, we are focussing on the way data are used in and about action research and, because of our own action research project, how this is interwoven with our teaching. There is no neat, dividing line between our teaching and our research. Rather, we try to improve our teaching as we reflect on our project, often with input from the students as to how our approach to action research is contributing to their development as student teachers. Evidence that could be said to be based in our research efforts becomes part of our teaching, in the following week or in the following semester.

This particular action research project arose in the context of existing work on action research on teacher education already being done at the UW-Madison. Noffke and Zeichner (1987) had already raised a number of issues requiring more attention, among them the importance of ensuring that our action research is <u>on</u> action research and not the students; that our work is with and <u>for</u> teachers, rather than <u>on</u> teachers (Kemmis, 1985). This task has both epistemological and methodological implications and therefore includes issues of ethics and politics; for us, the relationship between issues of knowledge and issues of ethics was the 'general idea' of this 'cycle' of an ongoing action research project. To push this further, we concentrated on the idea of 'growth' in reflection during student teaching -- less a matter of identifying 'growth' in terms of 'development' than exploring the dimensions of perceived learning as the student teachers themselves experience them. Methodologically, we consider the interpretations of actions and statements by the actor-speaker her or himself <u>and</u> within the context of the group as a <u>mutual</u> interpretive process, going well beyond 'support' to conceptualizing interpretation as an interactive process. In turn, this has implications for the very way in which we use data for evidence in and about action research as a research commitment within teacher education.

In this paper, we address only a small number of the issues about the use of data as it relates to action research. We begin with an exploration of these issues in our practice and then try to develop a more theoretical perspective, including a tentative description of characteristics of data that contribute to action research. The final discussion summarizes what we have learned about the way data works in and about action research as well as about teaching action research within student teaching.

EVIDENCE IN AND ABOUT ACTION RESEARCH

To understand the role of evidence in and about action research, it is not enough to look merely at separate pieces of data. Techniques for gathering data, which become used as 'evidence' in an investigation, may well be common across several approaches to educational research yet function differently when embedded in their particular project. Sandra Harding's formulation of the relationship and distinctions between method, methodology and epistemology have been useful to us in helping to flesh out how and why we think evidence takes on a different role in action research from other forms of research.

> A research *method* is a technique for (or way of proceeding in) gathering evidence....A *methodology* is a theory and analysis of how research does or should proceed....An *epistemology* is a theory of knowledge. It answers questions about who can be a 'knower'... what tests beliefs must pass in order to be legitimated as knowledge...;what kinds of things can be known
>
> (Harding, 1987:2-3).

In focusing on evidence in action research, we are trying to throw light on the interconnections of method, methodology and epistemology around which our major questions lie. We are under no illusions that in this short paper we can address these issues adequately, but it is necessary to situate this investigation about the particular place and role of evidence within a larger context of the definitions of and approaches to research in the social sciences. 'Evidence', as we see it, is thus a shorthand concept which describes the use of data in ways that are congruent with the epistemological assumptions and methodological commitments embodied in our version of action research. For data to be used as 'evidence' presupposes shared assumptions of validity, and it is towards understanding our particular approach to validity that the theoretical parts of this paper are concerned. Within our context, then, evidence becomes a relational concept, grounded in two or more people as they proceed around issues of joint practice and conversations over separate, but related, activities.

The work we have done on action research with our students takes place in the context of a weekly group seminar and separate supervisor visits to the school to observe and discuss progress in teaching with each student and their cooperating teacher. At this stage of the project, we have not yet worked out how to involve cooperating teachers in the schools in the joint action research, apart from trying to help them understand what the project is about and why it is being undertaken. A number of teachers have contributed to the students' projects, sometimes as co-researchers, and a few have gone on to undertake their own projects as well (see Wood, 1988). In this paper, however, the focus is on the supervisor-student relationship.

There are three particular uses of data for evidence in the task of building dialogue in our work on action research. First, we have data in the form of information gathered on a topic under discussion or investigation: our project/s. Each student, as well as the supervisor, has data on her/his own focus which can be shared with the group. Dealing with this data becomes the focus of a second phase of data

gathering: data about how the group processes are working in meeting our goals, whether jointly set as co-researchers or individually in relation to our own specific situation. And then there is the data about what we are learning about action research - the focus of the supervisors in their joint project. All three foci for data gathering could be seen as fitting within Harding's 'method' category. At the same time, though, each fits within a particular view of how data are to be used and within a commitment to all members of the group as the producers of knowledge. The point of collecting the data is to further the communicative action of members of the group and in so doing, to promote greater articulation and understanding of the specific interests and tasks of student teaching within contemporary schooling on the United States.

USING DATA IN BECOMING A GROUP

Raw data is brought to the weekly university seminar by the students as a way of contributing to the seminar topic under discussion. Sometimes, the particular item is a result of conversations during classroom supervision, in which the cooperating teacher takes a part. Discussing their data allows students to take a 'leadership' role in the class, particularly as there are usually many forms of data available on the same topic, forms and foci which allow for a wide variety of interests and emphasis. Some of this data is collected expressly for a class topic; some arises from the student teachers' existing journal and observation materials in relation to their action research project; some is suggested or offered by the cooperating teacher. Calling on Brown's delineation (1982), we understand and explain different kinds of data to our students as primary (an artifact already existing within the situation), secondary (organized and collected specifically to follow up a question or issue), and tertiary (reflecting on the first two groups of data). Students can choose the material and thus their own level of personal engagement in the class project as a whole.

For example, on the topic of classroom management, a recent seminar group brought for discussion: copies of school policies about the discipline system for the school; individual shadow studies of 'problem' children; notes from interviewing a principal and a teacher; observation notes about two different teachers with the same class; copies of student reports and student class work; and a wealth of journal entries and anecdotes from the student teachers' own experiences and particularly their problems. As well, the supervisor brought to class as her data a list of relevant issues discussed in student journals, her observation notes from observing the students and discussing these issues with them at their schools; and photocopies copies of some of the students' material already submitted in the form of written observations. We also had a number of class readings on the topic, covering different points of view and levels of abstraction.

For most students, this topic is closely related to their current concerns in the classroom, and in fact, the topic had been moved forward on the seminar agenda because of this interest. During the meeting, the supervisor took notes on the discussion - forming data on the processes in which we were engaged for later discussion with the other supervisor and with students. Discussion of observational data and reflections from the seminar on the classroom data form a natural place for promoting a genuine three-way conversation.

At times, our (supervisor's) data on the students' progress in meeting agreed goals or outlined expectations contributes directly and immediately to the topic in hand. One example of this is a recent collage finished by the students on the topic of the curriculum in their classrooms. Three students had nothing about content anywhere in their presentations, which were mainly concerned with representing

loving and caring relationships among pupils and between teacher and class. Reflections about this on the part of the supervisor were able to be brought up in class, using the data being taken on the spot, as a way of raising the question of what the role of curriculum was in a teacher-student relationship. This strategy could be seen merely as an attempt at good 'teaching', rather than as an exercise in research. However, the emphasis on the reflexive use of data over time is what distinguishes this approach to research from other teaching efforts. In endeavoring to make the students' learning the focus of the seminar, this strategy of gathering data about this overtly discussed agenda of the supervisor forms a necessary cornerstone. The presence of constant feedback from the supervisor also encourages open discussion of the role of seminar, which the students feel as an understandable tension in conflict with their placement in the schools. Instead of the university as the site of practice and the school as a place of practice, we examine in the seminar the practice and the theory of both and the tensions between them. Discussion of their data also rehearses or models the way that their data for their action research project can be dealt with, both for its contributions to their practice in the classroom and for the potential for understanding that practice.

For the supervisor to become part of the ongoing relationship between student teacher-cooperating teacher is difficult but necessary if the university program is to offer any assistance and challenge to classroom teachers on whom the program as a whole depends. It helps immensely if the supervisor and cooperating teacher already know each other and if the cooperating teacher is interested in using the opportunity of having a student teacher in the room for thinking about her own practice. Without the capacity for the supervisor to make established classroom practice problematic as a participant in an ongoing conversation, the stereotypic gap betwen university and school is maintained. Cooperating teachers have noted in their feedback that they enjoy the action research project because it allows them to have an equal part in the three way conversations: they can contribute much to the data gathering, the reflection and the planning of future steps if the student teacher feels able to let them in. Copies of data from the supervisor's observations and conferences with student teacher and cooperating teacher are given to the student after each session, so that they have the same record for their own purposes. Some of these conferences have been audiotaped, mainly for the supervisor's data interests. We have found that the level of preparation for such conferences on the part of the student increases over time and that there is a tendency to become more reflexive in the choice of topics discussed at the later conferences.

For example, one student, Kathleen, came to the mid-term conference totally unprepared to discuss her own views on her progress, although this had been suggested earlier. While this conference was productive, especially in beginning the processes of articulated self-reflection on growth, the final conference showed a much clearer partnership in the determination of the agenda. That discussion also included topics of supervisory, and to an extent, cooperating teacher practices as well as the student teacher's own growth. The relationship itself, as a factor in the student teacher's development, had become seen as equally problematic and in need of exploration. Specific relationships among individuals such as in this triad of student teacher, cooperating teacher and supervisor, also contribute to the growth of trust and mutuality in the seminar group as a whole.

Using our evidence as part of the teaching process is an important means towards achieving some measure of symmetry in the seminar group. This is the only time in the week that the student teachers are a group. The rest of the time they are in separate classrooms with their cooperating teacher, with whom an intense and very personal relationship usually develops. To develop the commitment towards group reflection in twelve seminar meetings, against most of their previous university experience, is perhaps the most difficult challenge for us as teacher educators.

Mostly, we do not succeed as well as we would like. However, there have been some encouraging signs from seminar discussion and from comments from cooperating teachers about the projects that this is an aspect of our work that is valued and worth working on further. Since we see each of the student teachers in their classrooms, we are in a position to draw out links with other students' experiences and strengths, to suggest foci for conversations and to demonstrate the links between readings and their own experience. Given this pivotal role for the supervisor in the group, it is even more difficult to ensure that we do not remain the focus of attention and that real conversations develop among the student teacher group.

Discipline and Classroom Management

When so many of our students chose action research foci concerning discipline and classroom management, we were, initially, somewhat apprehensive. Many questions came to mind, reflecting our skepticism about the fruitfulness of this topic. Would this focus eliminate the more curriculum-oriented aspects of teaching which we felt were crucial to changing teacher practice? Was the choice of topic merely an effect of the timing of the project early in the semester? Would the students themselves would find it restricting later on in the semester? Would this really be an opportunity for us to help students to see and live the interconnection of issues? Would students focus mainly on the technical elements of discipline, particularly given the prevalence of setting up school-wide policies to promote systems of 'assertive discipline' currently proliferating in the local school district? Given the time constraints on student teachers and the pressure to build skills appropriate within their classroom and school setting, would this focus allow for open and honest three-way conversations among the student teacher, cooperating teacher and supervisor, with the potential to challenge existing practice?

After examining a number of the students' action research final reports and other data from seminar and cross-seminar groups, we came to realize that for students, classroom management and discipline were often short-hand terms to cover the whole area of teacher-student relationships. While there may be a separate literature around issues of justice and nurturance (see Noddings, 1984, 1986; Liston and Zeichner, 1988) from that dealing with race, class, gender and teaching technique, for these students and for us the ethical issues are an integral part of the practical challenges facing them. In our teaching, we learned to focus on the <u>interconnection</u> of different aspects of issues, and began to be able to teach our students more in the terms which they themselves were formulating.

This interconnection between the curriculum and issues of technique and ethical judgement can be seen more clearly by looking at the students' projects. Laurie's action research project looked on the surface, especially in its written form, as though all she was concerned about was to make students pass the time in transitions more easily and to help them to relax, become 'centered' and aware of their own reactions and tiredness. Certainly these foci were a strong part of her interest, especially in the early stages of the semester. She used music and relaxation techniques with her grade 1-2 class to help them to settle down and act as a group as well as individuals. This was important since the class was 'squirrelly' and not skilled in group activities. However, both Laurie and her cooperating teacher were interested in building a non-authoritarian, 'open' classroom. They used Laurie's project as a way to focus on how this goal was being achieved with a group who posed difficulties for them both. Laurie's questions guiding different stages of her investigation were simple-seeming and technical: "Is the rug too crowded? Dirty? Do some children prefer to sit up and relax? Is there too much stimulus in the room for some children who can't leave it alone? Why was there

resistance by K? The day was quite hectic; perhaps I needed to take more time to help them relax? Is spontaneity better than planned activities?" The data she gathered in her journal, looked in particular at students who were experiencing trouble in relaxing and in staying on task. This focus formed the basis of Laurie's discussions with her cooperating teacher, as well as requests for the supervisor to gather data when observing.

According to her, the impetus for the project lay in its links with her own experiences "I knew the benefits of positive self-image and overall well-being that I had received from doing yoga and listening to music. When this was linked to problems in the classroom in the early part of the semester, and the readings and discussions in seminar, Laurie's project became an important aspect of her teaching. Other student teachers' experiences had also influenced her understanding, even though their classrooms were not, on the whole, oriented towards some form of democracy in their practice of 'management'. Hearing about the assertive discipline approaches of other rooms and schools added to Laurie's interest in her own investigation as a viable option for contributing to better learning.

By the end of the semester, Laurie was excited to discover the interactions between what was happening in the class curriculum and students' behavior. "The best part of the research and the practice," she wrote, "was the realization that I was seeing teaching as bits and pieces that seemed unrelated when in reality they all work together to make teaching effective (or not effective!). Classroom management is not an isolated issue , but rather it ties in with the curriculum, my attitude/composure for the day, how prepared I am, whether it is going to rain or snow, or if there has been a long vacation, or a vacation coming up..... Vital to the success of a classroom is the mutual trust and respect that is developed among all the participants in the class. When the group feels like a 'community', everyone takes part in the responsibility of maintaining a classroom that is conducive to learning." (Laurie, December, 1987).

Six weeks into the semester, Laurie said she was concerned about whether she was making progress and how she could tell in an open classroom. Her supervisor suggested that there was some data she could look back on to chart her progress e.g. her own journal. She commented that she could now see how the things she was noticing became more complex, overlapping, building patterns. She also noted that she "hadn't been sure till recently what all the data collection was on about. Last week, it clicked." (Supervisor journal, October 13, 1987) Where before she was using the journal to record isolated bits of plans, information, observation data and ideas for the future, now she began to make explicit interpretations. This conversation was 'replayed' to the seminar as a whole and used as the springboard for three related discussions: about how people felt about their journals and the supervisor's responses; about action research and how it related to their teaching; and about the principles behind discipline approaches in different situations. In this way, the connections and tensions between school and seminar requirements could become part of the overt questioning of the seminar group; the curriculum of the seminar and the curriculum of the student teaching experience were fruitfully played against each other in the context of a discussion about the relationship of discipline and curriculum issues for the classroom.

"Technique" and ethical judgement

The problems of 'stage theory' approaches to the process of becoming a teacher are underlined in the previous narrative about a student's project. If justice, nurturing and other ethical concerns are not separated in student teachers' minds or in their interpretation of their practice, then it makes little sense to suggest that it is only at the higher/later stages, when they have 'mastered' earlier practical and technical concerns (McDaniel, 1984), that student teachers are capable of undertaking an

examination of ethical issues such as democracy. As we noted in another paper (Noffke and Brennan, 1988a), there are different technical and practical approaches according to the ethical stance you adopt. Therefore to treat the so-called practical either separately and/or earlier than ethical issues is to misrepresent quite seriously the experience and the concerns of student 'neophyte' teachers.

Two examples illustrate this point. For one student, Jane, issues of 'control' in her kindergarten classroom, especially during large group meetings for 'sharing' formed the beginning point of her action research. In one sense, her growth over the semester mirrors the 'stage theories'. She did alter her perspective from a focus on discipline techniques, to a growing concern for the children's feelings, to a concern with curricular and structural factors (e.g. room arrangement, time of day etc.). Yet to notice this pattern is to obscure the way that ethical thought was continually intertwined with 'technical' skill development. For instance, an early supervisory visit raised questions of purpose (Why did she see 'sharing time' as valuable to children? What do both the listeners and the sharers gain?) that were then tied to particular courses of action (sticking with the sharing time rather than choosing another activity, trying to involve the children more in discussion, focussing attention better).

As she explored these themes, she did develop skills, e.g. attention focussing techniques, clear consequences for inappropriate behavior. Yet she also raised new questions: How should one 'be' with children? How can one focus more attention on appropriate rather than inappropriate behavior? Gradually the center of her attention became less the individual 'misbehaving' child and more her own actions. This new set of skills (clearer directions, positive comments, question asking) developed as a result of moral deliberation.

The last phase of her project built on the first. Realizing that her purpose in using 'sharing time' had a lot to do with personal knowledge and that issues like student interest and self-control were valuable to her, Jane changed her focus to concentrate more on curriculum. She spent more time on her planning, choosing activities that allowed for greater participation, gave the children a simple questionnaire on their activity preferences, and encouraged children to resolve some of their own conflicts. Rather than proceed through a series of 'natural stages', changes in her actions were a reflexive process of deliberate thought, bringing into consciousness previously unarticulated and unquestioned moral issues, and technical skill development.

For another student, Kathleen, the shifts in foci for learning, amd the intertwining of curricular, ethical and technical deliberation and actions occurred in a quite different manner and included many autobiographical justifications. At her mid-term conference (11/3/87), she noted:

> I'm thinking...I learned the most listening to myself, listening to the things I said to the students and then thinking about the implications...I shouldn't have said that, I should have said something else, or let it go.

When asked if she knew why she focussed more on listening to herself during this field experience, she responded:

> My main concern before was the material. That's what I thought teaching was about. But being with kids as often, just seeing their emotions, how much they're a part of it. It doesn't matter what you're teaching, it's how you're saying things.

Two central aspects to this new concern seem salient. First, she saw it tied to a need to know more about each child, especially how they learned. Second, her

whole definition of 'classroom management' and her desire to "work on" this area more, hinge on her definitions of 'fairness' and 'caring'. In relation to the last example, she outlined a definition of 'fairness' that strongly indicated a belief in the need to treat each child equally, to make sure that the same rules and procedures applied to all children. By the end of the semester (final conference 12/10/87), Both aspects were merged:

> I was thinking about what I said [at the mid-term conference] about being equal. I don't think it's possible to be equal as far as how you treat people. Fair is a much better word for it. Because kids are so different. How can you be equal? Because, equal - I mean, they're not equal. There are so many differences and there's no way they're going to be treated equally because they have so many different needs.

Kathleen's attention throughout the semester, in her journal, in supervisory conferences, and in her action research, was expressed as a concern with her "discipline and classroom management style". Yet clearly the focus was not on developing a set of techniques but rather on an ongoing process of examining the relationship one has with others in terms both of ethical principles of caring and justice and instructional strategies. Some of the impetus for this reflexive process seemed closely connected, too, to her own biography. Often times, her discussion of the need for sensitivity to the social and emotional needs of children were punctuated with descriptions of episodes from her own contrasting experiences in a Catholic grade school. These were used to describe changes in beliefs about teaching:

> ...before, when I started, it was - I'm back in a Catholic grade school where I take your hands and slap you with a ruler. You know, turn your picture [on the bulletin board] over if you didn't have a handkerchief or clean fingernails... That was humiliating in third grade.

Curriculum questions, too, were considered in light of personal experience. Part of her rationale for her action research project on class discussion (outlined in seminar 12/9/87) was given in terms of helping children to learn to see knowledge as 'problematic':

> I found in my own schooling that passive learners are more likely to accept things without question. I came from a school where there was one right answer, it seemed, for everything. This is one of the reasons why I chose to pursue this. It wasn't until I got to college that I realized - I have a say. I can argue this. What the textbooks say doesn't mean that it's the truth.

There was in Kathleen's learning, then, no clear, linear progression in focus from management, to children, to curriculum. Rather, each was intertwined with the other and used as the topic for her own individual reflections and those of the supervisory and seminar groups.

Over the semester, we as supervisors learned to be more patient and, in waiting and reacting in conversational dialogue with students, were gradually able to raise critical points with students more directly than we have been able to do in other situations. We were able to see that the conversational-dialogue mode did grow over time, and fostered more profound attention to issues than ever before experienced in our teaching.

In this, we were able to follow earlier advice from Noffke (1986), that the technical, practical and critical dimensions of reflection are not hierarchically arranged and should not be treated as such in our seminars or supervisory conferences. All

three dimensions are important and connected (see also Noffke and Brennan, 1988). Living with that advice is not always easy, just as it is not easy to be patient enough to allow students to follow their own instincts and surface those instincts as embedded theories.

It might need to be pointed out that being patient and allowing for all three dimensions of issues to be explored does not imply a passive stance on the part of the teacher, in this case the supervisor. We are not waiting for them to 'rediscover the wheel', nor do we refrain from entering into conversations that grow progressively more 'symmetrical' (Habermas, 1984) as time passes. The equality of conversation partners is an important focus in our research quest for a "reciprocally educative process" (Lather, 1987:8). Unless and until there can be some symmetry in the conversation, there cannot be mutual reflection, let alone a group investigation. Scweickart's notion of the "coherence" of a conversation is an image for the way difference and disagreement can work to build a group effort without removing the separate interests and locations for different participants' activities (Schweickart, 1985). Without such difference among participants, the group is diminished in its potential to affect each individual as well as the group as a whole.

An example of this process could be seen in one of the final seminar sessions and in Kathleen's final conference the next day. At the beginning of the seminar, the supervisor described again her own action research project, its purpose and some of her tentative thoughts on the accumulated data so far. These, then, became the topic for a group discussion, the central focus of which was the idea of the students' 'context-specific knowledge' vs the supervisor's use of abstract concepts and general principles. Through an open discussion, wherein both the seminar agenda and the supervisor's practice were made problematic, several issues emerged. First, the students felt a real need to begin with their own direct experience in the classroom and in supervision and then look for patterns, before discussion of abstract concepts. This was felt not just as a way to better understand the abstract, but as a valuing of their needs, tensions, and joys. The second area had to do with the supervisor's form of feedback, usually at the beginning of the semester, a probing for the student's beliefs embodied in feelings of satisfaction and dissatisfaction with particular practices. The students felt this to be a conscious attempt at suspending judgement, which they felt was necessary. But it also led at times to a certain 'fuzziness' as to alternative practices. Kathleen expressed her feelings:

> I was just thinking about it, when was it? Last week. I need input... It's like I'm trying to find all these answers and I have nowhere else to look and I ... was this, am I doing this the right way? Or am I, should I be doing something different? Is there something else I should try? and I didn't feel I had enough of that. Comments on - it was always kind of like "we don't want to step on eggshells and tell her she's doing anything wrong. We don't want to think for her". So it's been going over and over in my mind and I keep thinking "I wish someone would just help me".

That 'help' came from other students as well as the supervisor. They shared their own reactions, how they saw the tension between developing their own thoughts and the need for concrete suggestions leading to the generation of an alternative 'practical' suggestion to the supervisor as to how she might deal with future groups. That group's discussion, it seemed, made it possible for the topic to re-emerge in the context of Kathleen's final conference. For the first time that semester, not only her 'progress' in teaching but the 'progress' of the relationship itself became the substance of real conversation.

Links to other theoretical issues about methodology

If we start from the epistemological position that knowledge is social, then we have to give attention to the interpersonal and institutional circumstances of the situations in which our student teachers find themselves. As teacher educators, we have put much of our pedagogical effort into working out ways to develop groups and group communication at the university and some equality of communication among students and between students and supervisor. Because of this, our work has tended to focus on discourse and we have found the arguments of Jurgen Habermas in his Theory of Communicative Action (1984, 1987) useful in our conceptualization of these processes. "Communicative action relies on a cooperative process of interpretation in which participants relate simultaneously to something in the objective, the social, and the subjective worlds, even when they thematically stress only one of the components in their utterances" (Habermas, 1987:120).

Traditionally, data has been seen as a way to objectify an aspect of the relationship of subject and world, in order for the detached observer to subject it to critical scrutiny. However, if our epistemological stance is such that we do not accept either the detached, unitary subject or this particular representation of the separation of subject and world, then this function of data in the research process is no longer viable. Data must be part of the relationship among a group and itself relational. Within the categories of discourse available to the group, the main area in which student teachers engage would be part of what Habermas calls the "moral-practical sphere" (1984:19). The conjunction of the normative and the practical is precisely the attention we want to pursue with our student teachers. If data are seen as a way of furthering relationships, then they can no longer be seen to have an existence separate from that relationship. Rather, they provide the opportunity for normative debate within the group, subject to the same practical and ethical demands that the rest of the relationship requires. Since our epistemological concerns have a moral and political dimension, this dimension must also be part of both method (data) and methodology.

Given our commitment to setting up group processes as a way for students to produce their own knowledge, the following characteristics are a tentative delineation of the potential for using data reflexively to contribute to the life of a group in formation and in action.

1. Data should be able to contribute to the dialogue of a group, with an emphasis on symmetrical relationships being built. As Carr and Kemmis put it, drawing on Habermas, "the conditions for truth telling are also the conditions for democratic discussion" (Carr and Kemmis, 1986:142). If action research in teacher education is to challenge the existing power relations, especially in the way theory and practice are seen to relate, then the research design must pay particular attention to how knowledge production works in student teaching practice and to the interaction of supervisor and student teacher. We do not want to see one version of imposition (by university-based research or by the press of the status quo in practice) replaced by another kind of imposition, also university-based but clothed in the rhetoric of emancipation. There is thus a need for the development of the action research as part of an explicit group process where different agenda are laid out for negotiation. Within this conceptualization of the project/s, the relationship among students in the seminar group and between student and supervisor (and where possible the cooperating teacher in the school) is a critical element of the research. Data is important because it can provide the focus for developing the relationship of "co-researcher" among group participants. Its presence emphasizes and embraces different perspectives and biographies within the group, while also building commonality of procedures for reaching understanding. Data acts as a catalyst to promote "communicative action"; it contributes to the possibility of "an

understanding among participants in communication about something that takes place in the world" (Habermas, 1984:11). Because data in our situation is largely about an action of one of the participants in the group, or at least from the situation in which they are a regular actor themselves, the individual interests and normative judgements are brought into the conversation.

2. Data, to be used as evidence, has to 'count' in the group within which it was generated. While the truth tests of more conventionally understood research, emphasize an 'objectivity' which is seen to exist outside of the researcher and the researched, validity measures in action research have to be developed within the group itself. Habermas argues that "validity claims of propositional truth, normative rightness, and sincerity or authenticity" (Habermas, 1987:137) can only be developed and tested within the framework of the group and its communicative action. If, as our program goals imply, we are trying to work towards students who see themselves as producers of knowledge as well as consciously reproducing knowledge, then data must enable them to articulate, argue, and critique not only their own ethical stance but also the criteria that lie behind those positions. "In the context of communicative action, only those persons count as responsible who, as members of a communication community, can orient their actions to intersubjectively recognized validity claims" (Habermas, 1984:14). The use of data is NOT an attempt to distance the self and the world but to allow interpretation of the relationship/s existing between self and world, and thereby to allow to be called into question the way in which those relationships are constructed and the criteria of truth and justice embedded in the actions under consideration. In this context, data provide a representation of and catalyst for questioning the principles, intentions, relationships and actions of participants; they give a common focus for the participants to put themselves and each other under scrutiny and challenge. They provide an opportunity for developing intersubjective validity claims and procedures. The ethical issues requiring judgement arise from the consideration of validity: as Habermas argues, truth claims are not a separate issue to 'freedom' and justice'. (Habermas, 1975).

A further qualification to this outline of group based validity is needed at this point. We do not suggest that the group is a closed and self-sufficient circle. That would be to fall into the trap of much phenomenological research, where the only form of validity is bounded by the participants' own subjective interpretations and tends to ignore the structural and institutional boundaries that help form that consciousness. If the group is conceived of as an expanding conversation, which draws in others, either in their actions or in their written record of theorizing and practice, then wider understandings can be made relevant by the individual. This also implies that individual consciousness does not provide the measuring stick for validity, enabling group work to push beyond both the philosophy of consciousness (Habermas, 1984, 1987) and the philosophy of the subject (Benhabib, 1986). The objectivity-subjectivity split, inherent in most forms of research, we here try to transcend through attention to the links between the personal, the theoretical and the practical which come together in the student's classroom practice and in the seminar through the action research project based in that classroom.

As a catalyst for surfacing debate about validity and the criteria for normative judgement within the group, data has an important role in ensuring that the action research processes are self-reflexive. Consideration of new data or revisiting old data with new questions and issues by a group of co-researchers rather than an individual researcher allows for constant questioning in a shared forum of the basis for both positions and propositions.

3. Data ought to have the potential to assist group members to build and articulate their own theories. In our situation, student teachers and

supervisors need to use the opportunity of the group to build up at least their understanding of what it is to be a student teacher and what it means to teach; of what schooling can be in the U.S.A.; and of the relationship of schools and the university. Often, students are unaware that their own 'common-sense' language is full of embedded theories, each with a history in their own biography and their culture's priorities. To address these embedded theories will often involve them in understanding how issues in education are interconnected -- that they have institutional as well as personal aspects, and operate within particular historical and contemporary time frames, and ideological and experiential/sensory dimensions (See Noffke and Brennan, 1988b). The data and the methodological framework in which it is used should throw light on the constructed institutional and structural framework of their world in relation to themselves constructed as individual and group actors. Since we are interested in the action research group for its potential to change practice and theory, it is important for method and methodology to be part of the living dynamic of understanding and action as they are in the process of transformation.

These three characteristics of data-in-use in action research have been built out of our experience in trying to use evidence with our students in promoting better student teaching experiences. As we work, we keep tripping over unexamined assumptions about research and, although reasonably clear about our goals, we find that they, too, need constant re-examination. It is only after looking at how we use data in our teaching that we see the connections with others' work such as Lather (1986) or Habermas (1984, 1987). Pursuing the theoretical through and with the practical act of teaching through action research, we find each other's company on the journey not only personally sustaining but also, as with our students, necessary to promote challenges to existing positions. Such challenges may be substantive to the metatheoretical work. For instance, since the history of group work in the U.S.A. is more closely tied to cooption and social control than to collaborative work, we have had many debates about how to avoid the pitfalls and address them explicitly.

Other issues we debate are more a matter of detail within our framework. Triangulation, for example, is often seen to be the means to gain validity through cross-checking of one data source with another. In the process, a richer and more complex picture is to be built. However, our hunch is that action research alters the emphasis: triangulation is undertaken not so much to get internal validity from other sources, although coherence among sources is still important, but rather to expose for argumentation the various possible validity claims that might be in operation. There is not one reading of a text or item of datum but many are possible. Keeping the conversation going within the group, even over a single semester, appears at this stage to offer the possibility of uncovering many more different options within the one set of data and within the mind-constructions of members of the group. Revisiting may perhaps be a more important approach to validity than cross checking with other data sources.

In learning about the uses of data and some characteristics of how data can be used within our epistemological framework, we also learned about some aspects of action research. In the process, we certainly taught better and thought more deeply about our teaching. If knowledge is socially constituted and historically embedded, then we recognized that students have to see and analyze their positions on this, as well as experience it. That is, the articulation of their analysis is an important and necessary part of the group process. The work on classroom management and discipline has definitely contributed to a different understanding of the relationship of the ethical and the practical through personal and group action -- with practical teaching implications for us as well as our students. The literature on caring, often seen in feminist literature, takes on another dimension, adding to our understanding

of the way that women students in particular learn to analyze and articulate their beliefs in practice. It also adds to our understanding of the way the practical has been separated from moral/ethical issues in the very language in which we conceptualize issues of discipline and classroom management.

However, merely understanding these things in our teaching and supervisory practice, is not enough. There are many points in our own practice which seem to contradict our most deeply held and articulated positions. Through examining them together, we may uncover more of the contradictions as the next place to start our questioning. For instance, while we are trying to practice this form of action research we remain part of an unjust and unequal society. This affects not only how much we can make our relationships symmetrical and dialogic but also acts back on the institution and our teaching within it: injustices and problems become more apparent, and seemingly intractable, especially to the limited sphere of action of undergraduate student teachers and even their (graduate student) supervisors. The pessimism which may result has to be overcome, not merely rejected or ignored.

Notes:

1. Other versions of action research include
   - action research as the investigation of the application of university-based research findings to the school practice (Griffin, 1983);
   - action research as a means of gaining understanding, interest and adoption of particular ideas or practices (Elliott, 1976-77);
   - action research as the action-oriented phase of a larger research project (Oja and Pine, 1983).

We prefer not to engage in purist-oriented arguments about definitional issues about action research, since our own understanding is changing as we undertake more action research and see both its potentials and disadvantages with our student teachers. However, we do emphasize that action research is research on one's own practice, undertaken systematically, over time. This may, and usually does, involve interaction with others' ideas in the form of theoretical and practical issues, but this interaction is as a result of one's own investigation and the questions posed there. We also emphasize the importance of sharing at least the reflection and planning elements of the research process with others, even if action cannot be undertaken jointly.

2. In the Elementary Education program at the U.W.-Madison, students take an Introductory course, 3 times a week, before proceeding to 27 credits of method-related courses in a variety of subject areas. Two, 2 credit practicums, with three half-days per week in schools for eight weeks, are associated with the major areas of Language Arts/Reading, and Science/Social Studies/Math. In their final semester, students are placed in schools for four and one-half days per week, and in addition have a weekly seminar with their supervisor who observes them approximately six times during the semester.

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